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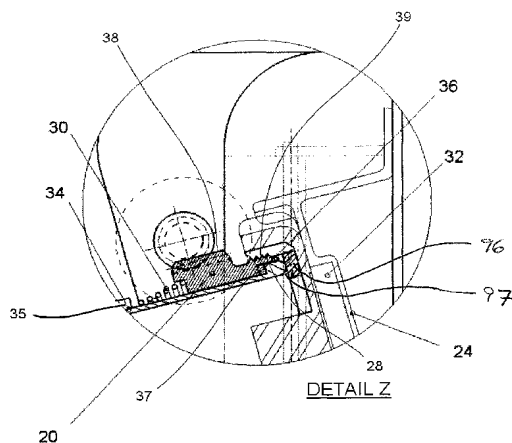
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(54) Title: AUTOMATIC GAS CAP ACTUATOR WITH REDUNDANCY



(57) **Abstract:** An automatic gas cap actuator system (10, 10') for automatic locking and opening of the gas cap (26, 74) of a vehicle's fuel tank is provided. The system (10, 10') has a gas cap (26, 74); and a cap actuator (16, 20, 48, 48'; 72) actuated by a non-manual power source (12, 12'). The cap actuator interfaces with the gas cap (26, 74) via an interface (39, 76) in a manner so as to be able to impart relative rotation between the gas cap and a fixing element (20, 78), so as to draw the cap into engagement with the fuel spout (34, 52), the interface and the gas cap being disengageable so as to permit manual use at the will of the operator. A remote controller within reach of a vehicle operator actuates the motor (12, 12'). In an advantage, the cap (26, 74) can be locked or opened both electrically and manually. Using the electrical unlock, the cap (26, 74) unlocks and opens without any necessary manual intervention. Thus, using the invention, the user finds the orifice (34, 52) that leads to the gas tank already open and ready for the insertion of the pump's filling tube. The system (10, 10') decreases the filling time and increases the cleanliness of the filling operation. When fueling is complete, all that is necessary is that the fueling door (46, 62) be closed to begin the actuation of the gas cap (26, 74) to its closed position.

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